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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/799,308

03/13/2004

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT

PAPER NUMBER

2855

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/799,308	Applicant(s) COONEY, DANIEL E.	
	Examiner Octavia Davis	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 20-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/13/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restriction*

1. Applicant's election with traverse of Group I, claims 1 - 6, 8 - 19 and 24 in the reply filed on 11/16/06 is acknowledged. The traversal is on the grounds that the subject matter is not independent and distinct and would not require additional burden on the examiner in performing a search. Upon further consideration of the restriction requirement, it is the examiner's position that applicant's arguments are not persuasive because Group II, claim 20, is directed to *an article* including a paint having a plurality of microcapsules and a matrix comprising a paint binder and does not require a composite material that is subjected to a mechanical impact or setting a design standard for a low-ductility material. Group III, claims 21 - 23, are directed to a *method for establishing a design standard for a low-ductility material* that includes setting first and second design standards for the low-ductility material and does not require a paint having a plurality of microcapsules and a matrix comprising a paint binder.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 20 - 23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 6 and 8 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Vincent et al (3,906,123).

Regarding claims 1 and 6, Vincent et al disclose a self-contained pressure sensitive record system comprising a material (paper) having a surface, an indicator coating having an impact-sensitive component that produces a visible change when subjected to a mechanical impact, applying the coat to the surface of the material (See Col. 4, lines 1 –13) and subjecting the material to a load and inspecting the material having the indicator paint thereon for the presence of the visible change (See Col. 6, lines 18 – 28).

Regarding claim 8, the first reactant and the second reactant react together to produce the visible change upon the impact (See Col. 4, lines 25 – 42).

Regarding claims 9 and 10, the coating is a light absorbing material that includes a dye (See Col. 4, lines 6 – 13 and 33 – 36).

Regarding claim 11, the material is accurately monitored during a series of tests (See Col. 6, lines 34 – 66 and Col. 7, lines 1 – 54).

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 – 5, 14 – 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent et al in view of Szweda et al (5,488,017).

Regarding claims 2 – 5, 14 and 24, Vincent et al disclose all of the limitations of these claims except for a teaching that the material has a tensile elongation to failure of less than about 2 percent. However, Szweda et al disclose a fiber reinforced ceramic matrix composite member comprising a reinforced ceramic matrix composite member represented by curve 2 having a percent elongation of failure in excess of about 0.4% (See Col. 8, lines 21 – 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vincent et al according to the teachings of Szweda et al for the purpose of, producing ceramic composite articles including a method of controlling the porosity in the matrix of a ceramic matrix composite material to curb undesirable porosity (See Szweda et al, Col. 3, lines 24 – 28).

Regarding claims 15 and 16, in Vincent et al, the coating is a light absorbing material that includes a dye (See Col. 4, lines 6 – 13 and 33 – 36).

Regarding claim 17, in Vincent et al, the material is accurately monitored during a series of tests (See Col. 6, lines 34 – 66 and Col. 7, lines 1 – 54).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 12, 13, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vincent et al and Szweda et al, as applied to claims 1 - 6, 8 - 11, 14 - 17 and 24 above, and further in view of Yamamura et al (4,618,529).

Regarding claims 12, 13, 18 and 19, Vincent et al and Szweda et al disclose all of the limitations of these claims except for teachings that design limits are determined for the composite, low ductility, polymer-matrix and ceramic material when the material has or does not have the paint applied thereto. However, Yamamura et al disclose a fiber-reinforced ceramic composite material comprising steps for determining a design criteria for the ceramic composite material including analyzing various properties of the material to achieve a desired composite material (See Col. 6, lines 52 - 64 and Cols. 11 and 12, Table 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vincent et al and Szweda et al according to the teachings of Yamamura et al for the purpose of, providing a ceramic composite material with a critical stress factor to achieve a great improvement in the inherent brittleness and non-uniformity in the mechanical strength of ceramics and a composite material that is suitable for used as a structure material (See Yamamura et al, Col. 7, lines 26 - 36).

### ***Response to Arguments***

9. Applicant's arguments filed 11/16/06 have been fully considered but they are not persuasive. In response to applicant's arguments that the references do not disclose "*an indicator paint comprising a mixture of a first reactant and a second reactant separated by a barrier that is rupturable so that the first reactant and the second reactant mix and produce the visible change when the indicator paint is subjected to the impact, applying the paint to the surface of the material, placing the material having the indicator paint thereon into*

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*circumstances where it may be subject to the mechanical impact, preparing the indicator paint having the impact sensitive component that changes color when subjected to the mechanical impact, preparing the indicator paint that does not emit light when subjected to the mechanical impact, not instrumenting the material having the paint thereon with light detection instrumentation and determining a first design limit and a second design limit for the composite material in the event that it has the indicator paint applied thereto and in the event that it has no indicator paint applied*

*thereto*", it is the examiner's position that Vincent et al disclose providing a material having a surface (See Col. 4, lines 37 – 41), providing, preparing, making the material from the indicator paint (coat) that has an impact sensitive component (the barrier) that produces a visible change when subjected to a mechanical impact (See Col. 6, lines 18 – 28 and 67 – 68, Col. 7, lines 1 – 2, 29 – 31 and 53 – 55 and Col. 8, lines 25 – 29), the indicator paint comprising a mixture of a first reactant and a second reactant (See Col. 4, lines 38 – 42 and 46 – 48 and Col. 8, lines 52 – 54, See claim 1 of Vincent et al, lines 52 - 54) separated by a barrier that is rupturable (See Col. 2, lines 3 – 10, Col. 4, lines 47 – 49, Col. 6, lines 18 – 28 and 66 – 67 and Col. 7, lines 1 - 2) so that the first reactant and the second reactant mix and produce the visible change when the indicator paint is subjected to the impact (See Col. 2, lines 3 – 14, see claim 1 of Vincent et al, lines 52 - 54), the coat is applied to the surface of the material (paper, substrate) (See Col. 4, lines 39 – 43 and 46 – 49 and Col. 5, lines 56 – 59), the material being placed into circumstances where it is subjected to the mechanical impact by means of the stylus or the like (See Col. 2, lines 3 – 10 and Col. 6, lines 18 – 24, See Examples 1 – Example 7 in Cols. 6 - 8), the material or sheet being inspected for the presence of visible change (See Col. 6, lines 66 – 67, Col. 7, lines 1 – 2, Col. 7, lines 29 – 31 and 52 – 54, Col. 8, lines 4 – 7 and 25 – 29, see claim 1 of Vincent et al) and in Yamamura et al, the material is produced or designed by a number of methods (See Col. 5, lines 59 – 61 and 63 – 68 and Col. 6, lines 1 – 17), the mechanical strength of the material is increased (See Col. 6, lines 33 – 37) to produce a design criteria for the material, and

design standards of the material are produced including its bending strength, critical stress intensity factor and degradation (See Col. 6, lines 52 – 64). With respect to “*preparing the indicator paint that does not emit light when subjected to the mechanical impact, not instrumenting the material having the paint thereon with light detection instrumentation*”, “The selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) and in *Vincent et al*, the coating is a light absorbing material that includes a dye the does not emit light, thus the references still stand.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



OD/2855

1/31/07



MICHAEL CYGAN, PH.D.  
PRIMARY EXAMINER